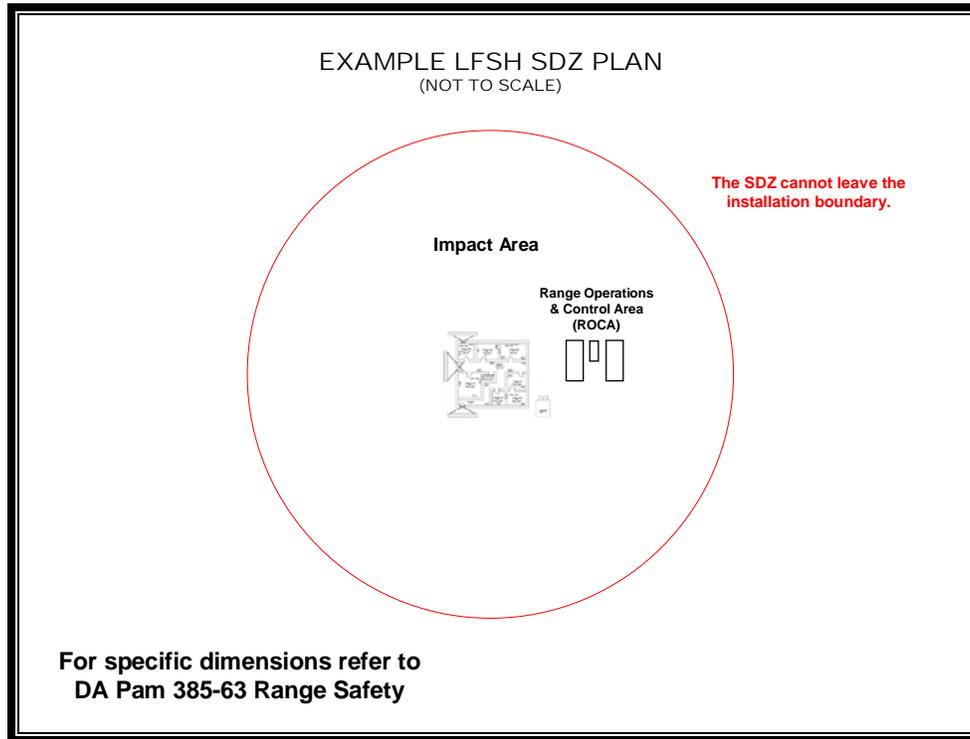


# LIVE FIRE SHOOTHOUSE (LFSH) SURFACE DANGER ZONES (SDZ)



Definition: Per DA PAM 385-63: The ground and airspace designated within the training complex (to include associated safety areas) for vertical and lateral containment of projectiles, fragments, debris, and components resulting from the firing, launching, or detonation of weapon systems to include explosives and demolitions.

The Surface Danger Zone (SDZ) is a depiction of the mathematically predicted area a projectile will impact upon return to earth, either by direct fire or ricochet. The SDZ is the area extending from a firing point to a distance downrange based on the projectiles fired. This area has specific dimensions for the expected caliber of the weapon(s) being fired so that all projectile fragments will be contained in this area. These dimensions are found in DA PAM 385-63 - Range Safety.

While this area is not considered part of the range design, it is one of the deciding factors in the determination of the location upon which the range facility can be built and the orientation of the lanes and targets. Typically, a composite SDZ is generated to encompass all firing points and the firing of several different caliber weapons. It encompasses all weapons within the largest SDZ footprint. No part of the SDZ may leave the installation property. SDZs from different ranges may overlap, but no SDZ will fall on a part of another range where soldiers are training.

General: The example SDZ for the Shoothouse is based on the 3,437m hazard area for the 5.56mm M855 ball ammunition. The SDZ is a circle derived from the 4 corners of the Shoothouse. This allows targets placement at any position within the Shoothouse. Another method is to place the targets and define firing points. This method limits to scope of the Shoothouse but allows the Shoothouse to be placed in a location where a 360 degree SDZ is not practical.

The actual SDZ is based on weapon system used, target/firing point location, and the ricochet characteristics of the bullet absorbing walls.

The roof of the Shoothouse is not bullet absorbent; therefore it will not reduce the size of the SDZ. A red line will be painted on all interior walls at a height determined by the installation safety officer. This line is a control measure similar to the left and right limit markers on other firing ranges.

It is possible for a projectile to escape the Shoothouse and not impact the outer walls/berms; therefore the bullet absorbing walls or berms outside the doors and blow panel do not reduce the size of the SDZ.

Note: For proper handling, transportation, and storage of ammunitions and explosives please refer to DA Pam 385-64 Ammunition and Explosives Safety Standards.

Deviations: Personnel will not be within the SDZ hazard area while live fire training is being conducted unless a deviation to the SDZ has been approved at installation or MACOM level. It is imperative that during the planning and design process all parties understand the impact of the SDZ for this facility.